

DOCUMENT RESUME

ED 121 196

HE 007 643

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TITLE Higher Education and the National Economy.
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PUB DATE Jun 75
NOTE 5p.
AVAILABLE FROM Society for College and University Planning, 3 Washington Square Village, Suite 1-A, New York, New York 10012 (\$1.00)
JOURNAL CIT Planning for Higher Education; v4 n3:1/5 Jun 1975
EDRS PRICE MF-\$0.83 HC-\$1.67 Plus Postage
DESCRIPTORS Budgeting; Business Cycles; *Economic Climate; Educational Administration; *Educational Economics; *Educational Finance; Expenditures; *Financial Problems; *Higher Education; Operating Expenses
IDENTIFIERS *Higher Education Price Index

ABSTRACT

The effect of inflation and recession on the budgets and character of academic institutions is examined. The seriousness of the problem is emphasized, and the rising costs are discussed in terms of the Higher Education Price Index (HEPI) constructed by Halstead. It is based on a detailed breakdown of expenditure categories and is the least dependent on ad hoc weighting systems. The HEPI's shortcomings are evaluated, such as the fact that it is dominated by movements in its treatment of fuel costs, and its consideration of salary policies and other budgetary decisions in colleges and universities. It is noted that what has made the recent inflation so destructive is that it has not been accompanied by any of the offsets that could be expected, such as rising levels of money income and rapid increases in the revenues received by federal and state governments. The problems associated with economic realities facing universities and their high academic expectations are assessed. (LBH)

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planning

Vol. 4, No. 3: 1/5 June 1975

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for higher education



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Higher Education and the National Economy

The impact of severe economic conditions is felt unevenly by different sectors of the national economy. Colleges and universities are affected in particular ways which can be measured by several recently-developed specialized indices. William G. Bowen, president of Princeton University, has evaluated the effect of inflation/recession on the budgets and character of academic institutions. What follows is an abridged version of a presentation by Dr. Bowen to the Regents of the University of the State of New York Eleventh Annual Trustees Conference, held in March 1975 in New York City.

The effects of inflation on colleges and universities may be a subject sufficiently depressing to merit crying about rather than talking about. But we need to do more than just feel sorry for ourselves and our institutions. We need to understand the basic nature of our current financial problem so that we can explain it to others and make reasonably informed policy decisions ourselves.¹

The Seriousness of the Problem

There should be no question in anyone's mind about the seriousness of the overall financial problem faced by higher education in the United States today as a direct consequence of the state of the economy. To be sure, the financial health of a college or university cannot be measured simply and objectively by recourse to a statistic like earnings per share. As the U.S. National Commission on the Financing of Postsecondary Education noted in its Report: "Perhaps the only unequivocal proof of financial distress among educational institutions is their actual demise." That is, however, a rather draconian test, and the fact that most institutions manage somehow to balance their budgets and to survive is a source of only limited encouragement.

Among the major private universities, Brown has had to withdraw more than \$25 million from endowment to fund current operations since 1968-69, leaving only about \$18 million in accounts from which further withdrawals can be made. Columbia needs to close a potential 1975-76 budget gap of \$5 million which, by extrapolation, could grow to \$35 million by 1980. Harvard, the best endowed of the major private universities, has reported an unrestricted operating deficit for the Faculty of Arts and Sciences of \$1.4 million for 1973-74, and projects an even larger shortfall this year.

The small private colleges, which for the most part can call upon neither sizeable endowments nor extensive

research funds, are also gravely threatened. Because of a concern that they may jeopardize existing support, some of these colleges are reluctant to discuss their economic problems publicly, an unfortunate though understandable situation. In some cases these colleges have been forced to reduce expenditures drastically, to compete aggressively to maintain or increase enrollments, and to eliminate effective programs. Some have had to close.

The public sector has enjoyed no immunity. In the face of declining state revenues, some states like Florida have cut back their 1975 appropriations in mid-year. The University of Connecticut, which had experienced a three-year 2.4% decrease in its faculty and a 3.3% increase in its student population, learned in January that its budget for the current year was being cut 2.5%. The University of Vermont, which already has eliminated over 100 faculty positions and intercollegiate football to save \$1.5 million, has had \$300,000 of its 1975 appropriation impounded. The University of Michigan faces a 1.5% cut in its state appropriation this year, 2.5% more next year. Public institutions throughout the country have been cutting back on hiring and promotions, limiting purchases of equipment and supplies, deferring maintenance, and delaying new projects and programs.

Effects of Inflation on Costs

The fact that all elements of higher education are in such serious financial difficulty, all at the same time, suggests the pervasive nature of the underlying pressure. Most visible and significant has been the pressure exerted on the expenditure side of educational budgets by inflation in the last few years.

The effects of inflation depend on the rates of increase in the prices of the particular combination of goods and

services bought by the particular sector in question. No one overall measure of inflationary impact is appropriate for any particular sector of the economy. In recognition of the need to develop disaggregated measures of inflationary impact, at least five price indices have been developed for all or part of higher education. The American Council on Education's Office of Administrative Affairs and Educational Statistics has converted all five indices to a common base year (1963-64), and there is reasonably close congruence among them. In comparison to the Gross National Product implicit price deflator, all five show a much greater inflationary impact on higher education over this period than on the overall economy.²

I shall refer from here on to the Higher Education Price Index (HEPI) constructed by D. Kent Halstead, which is based on the most detailed breakdown of expenditure categories and is the least dependent on ad hoc weighting systems.³ This index has risen at an appreciably faster rate over the last twelve years (about 5.3% per year on the average) than has either the Consumer Price Index (about 3.6% per year) or the GNP deflator (about 3.5% per year). Lest anyone underestimate the magnitude of this differential, it means that, whereas prices in general have risen about 50% over the last decade, the cost of higher education has risen over 75%. This pattern is consistent with the long-term tendency for the cost of education to rise more rapidly than prices in general, due principally to the labor-intensive nature of higher education and the greater difficulty in achieving productivity gains in education than in the economy generally.

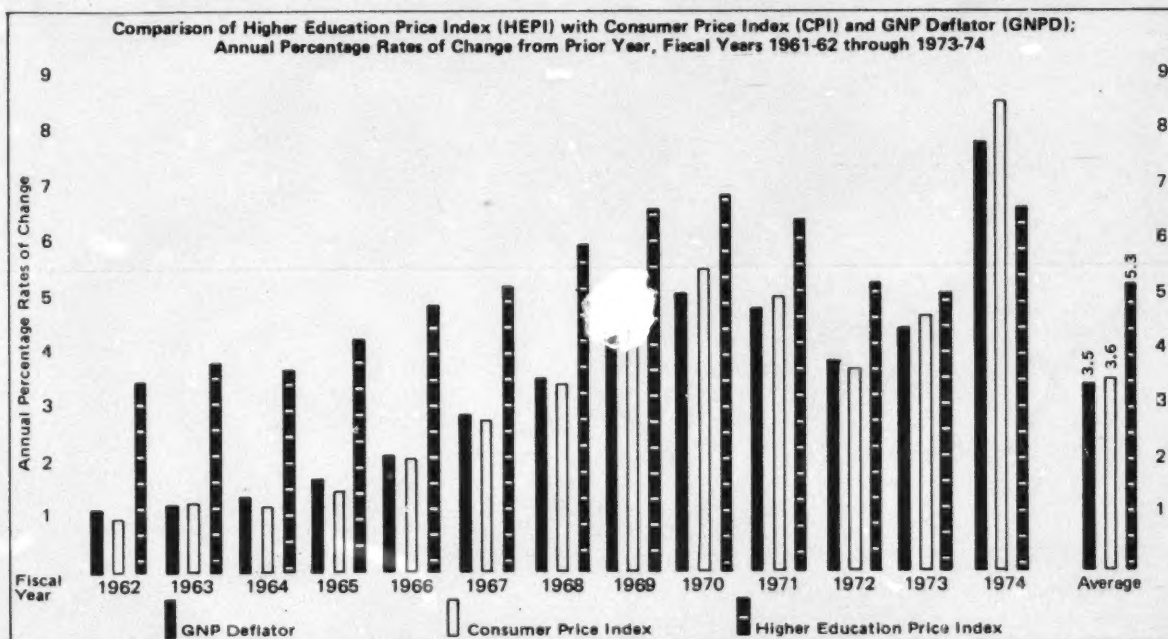
The recognition of the tendency for education, like other services, to become relatively more expensive over time is fundamental to any understanding of the long-term problems of financing higher education. I have discussed this problem in a study for the Carnegie Commission, and shall say no more now except to urge that in our concentration on the special exacerbating problems we now face, we not lose sight of our long-term problem.⁴ It would be comforting to think all would be well for the financing of higher education if only the national economy would behave "properly" again, with less inflation and less unemployment; but that assumption would be entirely unwarranted.

However, it is the recent rates of increase in the indices that are now of greatest interest. In sharp contrast with the long-term experience, in 1973-74, both the CPI and the GNP deflator rose faster than the HEPI, with the CPI approaching double digits. The principal explanation may lie in the nature of recent price increases, closely tied to rising food and energy costs.

That the HEPI uncharacteristically rose less rapidly than other indices over the last year should not obscure how rapidly it did rise. It went up 6.8% between 1972-73 and 1973-74, the second highest year-to-year change the last decade.

Shortcomings of the Price Index

Moreover, this index has not captured the full impact of inflation on our institutions. The HEPI is dominated by movements in personnel costs (82% of all costs reflected in the index), in part because "auxiliary activities" are



excluded (on the grounds that they are generally self-supporting, which unhappily is not always true). In fact, this exclusion is questionable if such activities are thought to be related to basic educational purposes and if our objective is to measure the price rises of *all* inputs into the process of higher education. And their exclusion has helped to minimize the impact of recent inflation, since the costs of food services and dormitories (the principal auxiliary activities) are, of course, affected significantly by the prices of food and fuel.

The treatment of fuel costs may cause trouble in another respect. In the HEPI, fuel costs receive a weight of only 3%, a source of difficulty in its own right. Moreover, the index assumes no change over time in the relative importance of different kinds of fuel. Thus, the index cannot reflect higher fuel costs resulting from the unavailability of natural gas. Institutions have had to shift the mix of fuels toward oil, which is roughly three times as expensive as gas.

The HEPI (or any index constructed in a similar way) is also bound to understate the effects of inflation in a period such as this for one other reason, related to salary levels. Salary policies and other budgetary decisions in colleges and universities, especially over relatively short periods, are at least as much a *result* of the financial problems affecting higher education as they are an indication of the magnitude of upward pressure on costs. While "ability to pay" affects wage determinations in many sectors of the economy, I suspect that faculty salaries are particularly sensitive to this factor. The collegial nature of most colleges and universities, the commitment of many faculty members to their institutions and to such goals as maintenance of student aid and of "reasonable" tuition levels, the relatively insulated nature of some academic markets, and a fair amount of empirical observation support this conjecture.

Thus, at a time of financial stringency, it should not be surprising to find faculty salaries rising less rapidly than wages and salaries in general. Between 1970 and 1973, the index of average faculty salaries rose a total of only 12.3%, whereas the rate of increase for wage and salary workers in general was 19.7%. Preliminary data for fiscal year 1974 suggest that faculty members did a bit better than in the immediately preceding years (especially in public institutions); however, the final figures for 1974 will probably not alter the general pattern.⁵ Thus, indices based heavily on the actual movements of faculty salaries already reflect, at least in part, the underlying financial distress, and therefore understate the real pressures being felt by academic institutions.

Effects of Inflation/Recession on Revenues

To understand the current plight of higher education, we must also look at the revenue side of our budgets. It is the inflation *cum* recession that is causing such serious difficulties for institutions (as well as for those of us still

brave or foolish enough to continue trying to teach elementary economics).

Almost every source of revenue for private and public institutions has been affected. The burden of tuition, for example, is much greater in the face of unemployment and reduced real incomes. In a more "ordinary" inflationary period, it would be much easier for student and their families to pay the inevitably increasing charges imposed by educational institutions—and this in turn would make it somewhat easier for the institutions to increase revenue from this source. Under present circumstances the fear of affecting both total enrollments and the composition of student bodies, and a concern for the well-being of the individuals involved, inhibits the rate of increase of student charges. This is a particularly serious problem for institutions already concerned about maintaining enrollment in the face of discouraging demographic trends.

Also, the lack of increased revenue from other sources is forcing a number of institutions to levy such large increases in tuition and other charges that the cost differential between private and public institutions is widening further. This is a worrisome development for the whole of American higher education, requiring appropriate public policy measures.⁶

As noted earlier, some states have been cutting their higher education appropriations in mid-year; most are seeking further expenditure reductions. Moreover, many private colleges and universities also benefit from state support and are feeling the impact of reductions. Federal expenditures for higher education, affecting both public and private institutions, have also been under serious pressure and have not come close to keeping up with inflation.

Current economic conditions have also had a very serious effect on earnings from endowment. Statistics on endowment income are notoriously slippery, yet the negative effects of prevailing business conditions are easily recognizable. Corporate dividend growth has slowed markedly and some absolute reductions are occurring. Interest rates are declining after hitting all-time highs in 1974 (when they to some extent counteracted slower dividend growth). At Princeton, endowment income (as traditionally defined to include only dividends and interest earned on investments) has risen at an average annual rate of about 5% for many years. Now, however, we are experiencing an increase of about 2.5% for the year ending June 1974 and an actual decline in the next year. We cannot expect the rate of growth in endowment income over the next few years to keep pace with normal rates of increase in expenditures, let alone recent inflationary rates.

The situation is most difficult for institutions that, for entirely defensible reasons, have been including in endowment income some part of the long-term capital appreciation on their portfolios. When income from endowment is determined by a total return formula geared to the market value of the portfolio, price declines

of securities have a direct effect on spendable income. The result can be an actual decline in the contribution of endowment income to the current budget, the erosion of the principal of the endowment fund, or both. Under these circumstances it is hard not to worry about the long-term ability of endowment funds to generate the ever-increasing amounts of income needed in the future.

Declines in the market value of portfolios have also meant declines in the value of reserve funds, at a time when many colleges and universities have had to dip into such funds to pay their bills. And of course when security prices are depressed, it is necessary to liquidate more units of endowment to satisfy any given dollar obligation.

The Council on Financial Aid to Education reports that while many donors are aware of the plight of higher education and of the need to give generously to both private and public institutions, gifts from private sources have also not kept up with inflationary trends. Here again, inflationary pressures, income reductions, and a depressed stock market have taken their toll. Moreover, attention to the needs of other worthy causes, affected by many of the same economic pressures, has helped make this a most difficult period in which to raise money for higher education.

What has made the recent inflation so extraordinarily destructive is that *it has not been accompanied by any of the offsets we might have expected*. On the basis of what we were taught, we could have expected rising prices to be accompanied by rising levels of money income and by rapid increases in the revenues received by federal and state governments. This should have made it somewhat easier to raise tuition, to increase income from endowment and from gifts, and to benefit from increased governmental appropriations. The absence of these offsets—and the presence in so many instances of their opposites—have made this an extraordinarily difficult and threatening period.

Economic Realities and High Expectations

I view our situation in rather stark terms because I have high expectations for our institutions; I think that we must aspire to much more than survival. To be sure, it is difficult to measure how well, or how poorly, we are meeting *qualitative* standards. Thus, it is all too easy for there to be a slow, unspectacular, perhaps even for a time unnoticed, decline in the quality of education, scholarship, and research. After considering the implications of actions that a number of institutions are being forced to take right now to meet economic realities, I wish I thought we were further away from this prospect.

And I worry too about preserving access to all kinds of colleges and universities for young people from every background and income level. Attaining this objective is important not just for the individuals and institutions involved, but for the society as a whole.

There are no simple or quick solutions to these problems, but there are things that can be done. For example, a relatively modest national program of competitive fellowship awards could help sustain high quality graduate education. Deserving of serious consideration are the proposals recently advanced by the Carnegie Council on Policy Studies in Higher Education, including the proposal to provide funds to offset partly the higher tuition of private institutions. Discussions are now under way in Congress on several student aid proposals; I am sure there are many other positive actions at both state and federal levels that deserve careful thought.

We have a clear obligation to do all in our power to achieve every reasonable economy. And I believe that, as we try to encourage greater private and public support, we have an equally clear obligation to make the case for *all* of higher education, not just our own institution or our own kind of institution.

It is important to make a special effort to prevent these difficult problems from exacerbating conflicts within and between institutions. This period of severe financial difficulty creates many stresses and strains, and yet we have to maintain a milieu in which students, members of the faculty and staff, alumni, trustees, regents, and legislators retain a sense of shared commitment to common educational goals. That is not going to be easy. But if we fail to maintain a sense of academic *community* and a spirit of genuine cooperation and good will, the "cost" to higher education will not be measured in dollars alone.

We cannot afford, philosophically or economically, to have the public and private sectors of higher education divided and divisive. The strength of American higher education depends now, as it has for many years, on a distinctive pluralism. There is too much for all of us to accomplish in complementary ways for us to allow the economic pressures we all confront to do anything but encourage us to work together.

—William G. Bowen

NOTES

1. I am indebted to Mr. James Klumpner, a graduate student in the Woodrow Wilson School of Public and International Affairs at Princeton, for his help with the data presented in this paper.

2. See *Higher Education and National Affairs*, November 22, 1974, p. 5.

3. The index we use here differs from that presented in Halstead's book, *Statewide Planning in Higher Education*. It has been revised by Halstead to refine the concepts further while preserving the basic concepts and approach. We are grateful to Mr. Halstead for providing us with the numbers for his new index, and with other helpful information.

4. William G. Bowen, *The Economics of the Major Private Universities*, 1968.

5. *AAUP Bulletin*, Summer 1974, p. 175. It is true that the relatively slower rate of increase over this period in academic salaries can also be attributed in some degree to the "softness" of academic labor markets. However, this "softness" is itself partly the result of the same basic economic problems, and it is hard to sort out the pure effect of lessened ability to pay from the derived effects reflected in reduced demand for academics.

6. *The Federal Role in Postsecondary Education, Unfinished Business, 1975-1980*, report of the Carnegie Council on Policy Studies in Higher Education, 1975. The report notes that between 1960-61 and 1974-75, the average tuition charge at public institutions rose from \$856 to \$2,241. At many private institutions, tuition is even higher.